Plant Physiol. (1997) 115: xxix–xxxii
0032-0889/97/115/xxix/04

Author Index

A

Ádám, Attila L., 853
Ahmed, Sharif U., 311
Aked, Julia, 453
Alberte, Randall S., 599
Almon, Einat, 1599
Altschmied, Lothar, 827
Anderl, Maximilian, 669
Anderson, Jan M., 151
Anderson, John W., 1671
Anderson, Louise E., 1201
Andrews, T. John, 1569
Antosiewicz, Danuta M., 1319
Apperley, David C., 587, 593
Aragoncillo, Cipriano, 71
Arata, Yoji, 1515
Aro, Eva-Mari, 551
Arredondo-Peter, Raúl, 1259
Asard, Han, 543

B

Bacic, Antony, 1421
Back, Kyoungwhan, 437
Backhausen, Jan E., 705
Badger, Murray R., 1163, 1569
Bailey-Serres, Julia, 1109
Bak, Søren, 1661
Bakó, László, 93
Ball, Steven, 949
Barbier-Brygoo, Hélène, 533
Bar-Peled, Maor, 311
Bartels, Dorothea, 113
Baskin, Tobias I., 101
Basra, Amarjit S., 15
Bassi, Roberto, 171
Bauchrowitz, Martina A., 869
Beck, Christoph F., 1241
Beevers, Leonard, 29
Benning, Christoph, 1175
Benz, Roland, 891
Berglund, Micael, 1001
Bettermann, Maren, 891
Beveridge, Christine A., 1251
Bhaduri, Tirtha J., 727
Bird, Colin R., 453
Bisseling, Ton, 351
Blount, Jack W., 41
Bogorad, Lawrence, 477
Bohnert, Hans J., 527, 1211
Bonilla, Ildefonso, 1329
Bonnet, Philippe, 1557
Boss, Paul K., 1155
Botha, Frederik C., 1651
Bouchet, Brigitte, 949
Boufflet, Marie, 533
Bowes, George, 1049, 1681
Bown, Alan W., 1
Braam, Janet, 181, 1319
Brady, Jeffrey D., 87
Brauer, David K., 1119
Brewin, Nicholas J., 1431
Broer, Inge, 939
Brown, R. Malcolm, Jr., 643
Brownlee, Colin, 249
Brummell, David A., 717
Buchala, Antony, 61
Buchholz, Wallace G., 361
Buléon, Alain, 949
Busam, Gunther, 1029, 1039
Bush, Daniel R., 1127

C

Callaham, Dale A., 51
Callard, Didier, 1385
Cambridge, Marion, 1231
Campbell, Wilbur H., 1135
Campos, María Eugenia, 1329
Canioni, Paul, 1505
Capel, Juan, 569
Caplan, Allan B., 159
Capote-Maínez, Nieves, 1307
Carde, Jean-Pierre, 1185
Carneiro, Newton, 1101
Carrillo, Néstor, 1721
Casado, Rosa, 71
Cassab, Gladys I., 1329
Castagnaro, Atilio, 1499
Castrejón, Lidia, 1329
Cattolico, Rose Ann, 773
Caubergs, Roland J., 543
Chan, Sherwin Y., 299
Chandler, John W., 113
Chang, Kung-Ching, 229
Chang, Su-Chih, 1461
Chappell, Joe, 437
Chen, Liangfu, 299
Chen, Lishan, 1127
Chen, Zhixiang, 343
Cheng, Ming, 971
Cheniclet, Catherine, 1185
Chinnappa, C.C., 129
Chino, Mitsuo, 901
Chitnis, Parag R., 1699
Chitnis, Vaishali P., 1699
Chmara, Wendy, 1211
Cho, Moo Je, 763
Chory, Joanne, 1533
Chourey, Prem S., 375
Chow, Wah Soon, 151
Christopher, David A., 213
Clarke, Steven, 1481
Clarkson, David Thomas, 1231
Cleemput, Greet, 1619
Clément, Anne, 847, 1733
Clendennen, Stephanie K., 463
Cliquet, Jean-Bernard, 623
Clore, Amy M., 1101
Clough, Richard C., 693
Collada, Carmen, 71
Colón-López, Milagros S., 991
Conklin, Patricia L., 1277
Conkling, Mark A., 1397
Conner, Timothy W., 971
Conrod, Sandrine, 1557
Conroy, Jann P., 15
Cooley, Brent A., 1681
Cooper, Arthur J.L., 1541
Cossins, Edwin A., 299
Cramer, Grant R., 317
Crawford, Nigel M., 1135
Culligan, Kevin M., 833
Currie, Graeme, 1421

D

Dahiya, Preeti, 1431
Dainese, Paola, 171
Danon, Avihai, 1293
DasGupta, Sarmila, 727
Davies, Christopher, 1155
Davies, Eric, 1083
Davies, Peter J., 1453
de Almeida Engler, Janice, 159
Deb, Rashmi, 727
De Boer, Albertus H., 1707
Delcour, Jan Arsène, 1619
Delledonne, Massimo, 501
Delmer, Deborah P., 375
DeMason, Darleen A., 737
D'Hulst, Christophe, 949
Diaz, Clara L., 869
Dietrich, Charles R., 501
Dieuaide-Noubhani, Martine, 1505
Dinand, Elisabeth, 793
Dixon, Richard A., 41, 1299
Dolan, Liam, 981
Donovan, Shannon G., 683
Doran, Edward, 773
Dörmann, Peter, 1175
Downie, J. Allan, 351
Dröge-Laser, Wolfgang, 939
Dumas, Christian, 1221
Dumbroff, Erwin B., 1073
Duncan, David R., 971

E

Echeverria, Ed, 223
Ehwald, Rudolf, 1087
Eichelmann, Hillar, 803
Endres, Matt, 1195
Estelle, Mark, 1009
Eun, Soon-Ok, 1491
Evron, Yoav, 1549
Ewing, Elmer E., 1453
Excoffier, Gérard, 793

F

Fan, Baofang, 343
Färber, Andreas, 1609
Faske, Maria, 705
Feldmann, Kenneth A., 981
Fennoy, Sheila L., 1109
Fenwick, Karen M., 587
Fink, Siegfried, 577
Fischer, Karin, 511
Fitzsimmons, Karen C., 427
Fletcher, Jonathan, 453
Flynn, C. Robb, 881
Frances, Shannon, 23
Franssen, Henk, 351
Fry, Joyce E., 971
Fry, Stephen C., 87, 181
Fujiwara, Toru, 901
Furbank, Robert T., 1163
Furuya, Masaki, 1533

G

Gage, Douglas A., 1541
Galiana, Eric, 1557

Gallagher, Lisa, 113
Gallant, Daniel J., 949
Gallie, Daniel R., 737, 1461
Gallois, Richard, 847, 1733
Garcia, Ana Beatriz, 159
Gerats, Tom, 159
Geurts, René, 351
Ghangas, Gurdev S., 1581
Ghosh, Sibdas, 1073
Gibeaut, David M., 317
Gilbert, Glena A., 1267
Gilbert, Simon Matthew, 1231
Giles, Larry, 783
Giordano, Mario, 1049
Godt, Dietmute E., 273
Gojon, Alain, 623
Gombos, Zoltan, 551
Gomez, Luis, 71
Gonzales, Robert A., 915
Gonzalez, Pedro, 223
Goodman, Howard M., 1525
Goosey, Lynn, 959
Govorunova, Elena G., 633
Gressel, Jonathan, 1443
Grierson, Claire S., 981
Grimm, Bernhard, 1175
Guern, Jean, 533
Guilfoyle, Tom J., 397
Gundlach, Heidrun, 1057

H

Ha, Marie-Ann, 593
Habben, Jeffrey E., 1101
Hadri, Az-Eddine, 351
Hagen, Gretchen, 397
Hahlbrock, Klaus, 283
Haigler, Candace H., 683
Hait, Nitai C., 727
Halkier, Barbara Ann, 1661
Hall, J.L., 263
Hall, Timothy C., 361
Hamazato, Fumiaki, 1533
Hanson, Andrew D., 1541
Hanzawa, Hiroko, 1533
Harada, Masayo, 199
Hargrove, Mark S., 1259
Haring, Michael A., 1241
Härtel, Heiko, 1175
Hattenbach, Andrea, 471
Hawes, Martha C., 1691
Hawkesford, Malcolm John, 1231
Hayashi, Hidenori, 1473
Hayashi, Hiroaki, 901
Hays, John B., 833
He, Zhili, 1569
Hegemann, Peter, 633
Heidstra, Renze, 351
Heineke, Dieter, 471
Heizmann, Philippe, 1221
Heldt, Hans W., 891
Hemphill, Dean, 1195
Hepler, Peter K., 51
Herrmann, Reinhold G., 827
Hessing, Martin, 1619
Hilal, Mirna, 1499
Hironaka, Catherine M., 971
Hoefnagel, Marcel H.N., 1145
Hoffer, Paul H., 213
Holland, Mark A., 865
Horowitz, Miri, 1599
Hörtensteiner, Stefan, 669, 677
Horton, Peter, 1609
Houlné, Guy, 1185
Howles, Paul A., 41
Hoyos, M. Elizabeth, 853
Hu, Zihua, 1359
Huang, Feng-Ying, 51
Hudson, Graham S., 1569
Hulett, John, 317
Hunt, Arthur G., 321
Hwang, Inhwan, 763
Hwang, Jae-Ung, 335

I

Ide, Hiroyuki, 1515
Ikehara, Norikatsu, 1405
Imai, Takahiro, 901
Ingram, Jonathan, 113
Ishikawa, Masaya, 1515
Iyer, Suresh, 159

J

Jacob, Jean-Louis, 847, 1733
Jahns, Peter, 1609
Jang, Hyun Jung, 763
Jansson, Stefan, 1525
Jarillo, José A., 569
Jarvis, Michael C., 587, 593
Jayachandran, Sanjay, 1109
Jenkins, Michael E., 1351
Jensen, Richard G., 527, 1211
Jiang, Liwen, 29
Jitla, Davinder S., 15
Johnson, Jerry L., 1371
Jones, Michelle L., 205
Jordan, Emily T., 693
Jung, Hans G., 41
Jung, Rudolf, 1629
Junghanns, Kay Teja, 1039

K

Kahn, Rachel Alice, 1661
Kanamaru, Kengo, 1135
Kanervo, Eira, 551
Kang, Shin Gene, 763
Kardailsky, Igor V., 1431
Kassemeyer, Hanns-Heinz, 1029, 1039
Kathiresan, Arumugam, 129
Ke, An, 1699
Ke, Jinshan, 1371
Keller, Harald, 1557
Kijne, Jan W., 869
Kim, Jimok, 335
Kinraide, Thomas B., 1119
Kirsch, Christoph, 283
Kirsch, Thomas, 29
Klessig, Daniel F., 343
Klucas, Robert V., 1259
Kneusel, Richard Edward, 1039
Kochian, Leon V., 657
Kohlstruk, Stephan, 1009
Köhne, Stefan, 939
Kohrs, Donald G., 599
Komor, Ewald, 609
Koncz, Csaba, 93
Kondo, Maki, 1065
Korth, Kenneth L., 1299
Kossmann, Jens, 949
Krämer, Ute, 1641
Kräutler, Bernhard, 669
Kuai, Jian-Ping, 1581
Kubo, Hiroyoshi, 1065
Kudlicka, Krystyna, 643
Kumpatla, Siva P., 361

L

Labavitch, John M., 717
Laisk, Agu, 803
Lamb, Chris, 41
Lambers, Hans, 1231
Lannoye, Robert, 171
Larkins, Brian A., 1101
Last, Robert L., 1277
Lawrence, Ellen B., 427
Lee, Michael S., 881
Lee, Youngsook, 335, 1491
Leigh, Roger A., 263
Lejay, Laurence, 623
Lelièvre, Françoise, 533
Lennon, Adrian M., 783
León, José, 427, 817
Lerdau, Manuel, 1413
Levine, Elaine B., 427
Li, Alex Dong, 1201
Li, Qingshun, 321
Liang, Benjamin M., 101
Liénart, Yvette, 793
Liu, Yidong, 343
Liu, Zhan-Bin, 397
Lohrman, Joseph, 1259
Lokstein, Heiko, 1175
López, Lorena, 1329
Los, Dmitry A., 875, 1473
Love, John, 249
Lowenson, Jonathan D., 1481
Lucas, William J., 1599
Luff, Lorenz, 493
Luthe, Dawn S., 229
Luu, Doan-Trung, 1221

M

Madore, Monica A., 1267
Mae, Tadahiko, 191, 199
Magnin, Noël C., 1681
Majumder, Arun L., 727
Makino, Amane, 191, 199
Manning, Kenneth, 453
Manschot, Ageeth, 1453
Marita, Jane M., 693
Martínez-Zapater, José M., 569
Marvier, Allison C., 263
Masoud, Sameer A., 41
Massa, Eddy M., 1499
Matern, Ulrich, 1029, 1039
Matile, Philippe, 669, 677
Matsunaga, Toshiro, 901
Mauro, Sergio, 171
May, Gregory D., 463
Mazzolini, Laurent, 1385
McMurry, Susan, 1453
Medina-Suárez, Rosybel, 453
Mei, Leng, 437
Meir, Shimon, 51
Mergold-Villaseñor, Claudia, 1329
Mertens, Jeffrey A., 1135
Meshcheryakov, Anatoli B., 1087
Metráux, Jean-Pierre, 61
Meunier, Pascal C., 991
Meyer, Christian, 623
Michael, Werner, 1087
Miller, Adam, 907, 1195
Møller, Birger Lindberg, 1661
Moore, Brandon d., 241

Moore, Paul H., 609
Moore, Thomas S., Jr., 1589
Moran, Jose F., 1259
Moreno, Hortensia, 1499
Moro, Gloverson L., 1101
Morot-Gaudry, Jean-François, 623
Moser, Daniel, 669
Mouille, Gregory, 949
Mount, David W., 1351
Mouritzen, Peter, 519
Mudgett, Mary Beth, 1481
Mueller, Martin J., 1057
Mühlecker, Walter, 669
Mullen, Robert T., 881
Müller, Herbert H., 1443
Müller-Röber, Bernd, 471
Murata, Norio, 551, 875, 1473
Murfet, Ian C., 1251, 1291
Murr, Dennis P., 137

N

Nagatani, Akira, 79
Naito, Satoshi, 901
Nakamura, Takahiro, 1065
Nakano, Hiromi, 191, 199
Nakayama, Masayoshi, 1009
Nam, Young-Woo, 1629
Nast, Gabriele, 471
Neuenschwander, Urs H., 783
Neumann, Katrin, 939
Newbigin, Ed, 1421
Newman, Jeffrey, 437
Ni, Weiting, 41
Nielsen, Niels C., 1629
Niemietz, Christa M., 561
Nikolau, Basil J., 501, 925, 1371
Nishii, Akiko, 477
Nishimura, Mikio, 1065
Nishio, Naomi, 841
Nishiyama, Yoshitaka, 1473
Noguchi, Kyotaro, 901
Novacky, Anton, 853
Nozue, Masayuki, 1065

O

Oda, Hisao, 901
Oja, Vello, 803
Okamoto, Haruko, 79
Oldfield, Ron J., 15
Olson, John S., 1259
Ormrod, Douglas P., 137
Oxley, David, 1421
Ozga, Jocelyn A., 123

P

Palatnik, Javier F., 1721
Palecanda, Lakshmi, 959
Paliyath, Gopinadhan, 137
Pallanca, Jane E., 1277
Palmquist, Debra E., 241
Pan, Jun-Min, 1241
Panabières, Franck, 1557
Pang, Shengzhi, 971
Papernik, Lisa A., 657
Parchmann, Stefanie, 1057
Paris, Gaston, 223
Paris, Nadine, 29
Park, Jeong Mee, 763
Park, Sang-Youl, 229
Park, Youn-Il, 151
Parry, Simon, 1421
Pérez, Héctor, 1329
Perez-Grau, Luis, 375
Pharr, D. Mason, 1397
Phillips, Thomas E., 29
Philosoph-Hadas, Sonia, 51
Piao, Hai Lan, 763
Pick, Uri, 1549
Pierson, Leland S., III, 1691
Pih, Kyeong Tae, 763
Pike, Sharon, 853
Polisensky, Diana H., 1319
Ponchet, Michel, 1557
Porter, Sarah G., 1009
Poulton, Jonathan E., 1359
Poupet, Alain, 1557
Pozueta-Romero, Javier, 1185
Prévôt, Jean-Claude, 847, 1733
Price, G. Dean, 1569
Price, William S., 1515
Puech, Laurence, 577
Purugganan, Mary M., 181, 1319

Q

Quilleré, Isabelle, 623

R

Rafia, Fatima, 1185
Raikhel, Natasha V., 311
Rameau, Catherine, 1251
Randall, Stephen K., 753
Ransom, Richard F., 1021
Rao, Mulpuri V., 137
Raskin, Ilya, 427, 1641
Rasulov, Bahtijor, 803
RayChaudhuri, Aniruddha, 727
Raymond, Philippe, 1505
Reid, David M., 129
Reid, James B., 1291
Reindl, Andreas, 93
Reinecke, Dennis M., 123
Reiskind, Julia B., 1681
Reumann, Sigrun, 891
Rhodes, David, 1541
Ribas-Carbo, Miquel, 783
Ricci, Pierre, 1557
Rich, Peter R., 1145
Roberts, Alison W., 683
Roberts, Keith, 981
Robertson, Donald S., 501
Robinson, Simon P., 1155
Rodermel, Steve, 907, 1195
Rodoni, Simona, 669, 677
Rogers, Gordon S., 15
Rogers, John C., 29
Rogers, Sally W., 29
Roitsch, Thomas, 273
Rojo, Enrique, 817
Rook, Fred, 7
Rosendahl, Lis, 519
Ross, John J., 1251
Roux, Yvette, 623
Ruan, Yong-Ling, 375
Ruban, Alexander V., 1609
Rübel, Christine, 291
Rüdiger, Wolfhart, 485, 493
Ryals, John A., 783

S

Sakamoto, Koji, 79
Sakamoto, Toshio, 551
Sakihama, Yasuko, 1405
Salamini, Francesco, 113
Salerno, Graciela, 223
Salinas, Julio, 569
Salomon, Michael, 485, 493
Salt, David E., 1641
Salvucci, Michael E., 223
Sánchez, Federico, 1307, 1329
Sánchez, Nayeli, 1329
Sánchez-Serrano, Jose J., 817
Sarath, Gautam, 1259
Sato, Tetsuya, 199
Satoh, Hiroyuki, 841
Schantz, Marie-Luce, 1185
Schantz, Rodolphe, 1185
Scheibe, Renate, 705
Schell, Jeff, 93
Schellenberg, Maja, 677
Schmidt, Frederick W., 1009
Schnable, Patrick S., 501, 925
Schöffl, Fritz, 93
Schopfer, Peter, 511
Schultz, Alexander, 1087
Schweizer, Patrick, 61
Seals, Darren F., 753
Seemann, Jeffrey R., 241, 317
Sendker, Martina, 705
Seneweera, Saman P., 15
Sewalt, Vincent J.H., 41
Seymour, Graham B., 453
Shah, Dilip M., 427
Sharkey, Thomas D., 1413
Sharp, Robert E., 101
Sharrock, Robert A., 959
Shelp, Barry J., 1
Shen, Bo, 527
Sherman, Louis A., 991
Sheveleva, Elena, 1211
Shiina, Takashi, 477
Shinomura, Tomoko, 1533
Shinozaki, Kazuo, 327
Shivaji, Renuka, 229
Shortt, Barry J., 427
Siebke, Katharina, 1163
Siedow, James N., 783
Šimko, Ivan, 1453
Sineshchekov, Oleg A., 633
Singer-Bayrle, Marielle, 705
Singsaas, Eric L., 1413
Smeekens, Sjef, 7
Smirnoff, Nicholas, 1277
Smith, Matthew D., 1073
Smith, Robert D., 1641
Sokolenko, Anna, 827
Somssich, Imre E., 283
Sonesson, Anders, 1001
Spalding, Martin, 907, 1195
Sponsel, Valerie M., 1009
Stanković, Bratislav, 1083
Staxén, Irina, 1001
Steffens, John C., 409, 1581
Steller, Diana L., 599
Stone, Julie M., 853
Su, Wenpei, 1135
Suh, SuJeoung, 335
Sumberg, Astrid, 803
Sun, Jingdong, 1371
Sun, Yuejin, 1101
Sunarpi, 1671
Sundberg, Björn, 577
Suzuki, Teri C., 1351
Svendsen, Ib, 1661
Symons, Gregory M., 1251

T

Tang, Fuqiang, 1589
Teng, Weimin, 361
Tenhaken, Raimund, 291
Thipyapong, Piyada, 409
Thomas, Howard, 669
Thomine, Sébastien, 533
Thompson, John E., 1073
Thompson, William F., 23
Tillard, Pascal, 623
Titarenko, Elena, 817
Tomizawa, Ken-Ichi, 79
Torrekens, Sophie, 1619
Toyoshima, Yoshinori, 477
Trelease, Richard N., 881
Trewavas, Anthony J., 249
Tsai, Chiu-Ho, 907, 1195
Tsvetkova, Nelly, 551
Tung, Pariana, 129
Tuominen, Hannele, 577
Tyerman, Stephen D., 561

V

Valle, Estela M., 1721
Van Gestelen, Peter, 543
van Huizen, Rika, 123
van Kammen, Ab, 351
Van Laere, Kristel, 1619
Van Leuven, Fred, 1619
Van Montagu, Marc, 159
Vicentini, Fabrizio, 677
Vierstra, Richard D., 693
Vignon, Michel R., 793
von Caemmerer, Susanne, 1163, 1569
von Schaewen, Antje, 705

W

Wada, Masamitsu, 79
Wagner, Anneke M., 617
Wagner, George J., 915
Wagner, Marijke J., 617
Walker, John C., 853
Walton, Jonathan D., 1021
Wan, Yuechun, 971
Wang, Hong-Li, 1599
Wang, Xuemin, 387
Watahiki, Masaaki K., 419
Watkins, Chris B., 137
Wegner, Lars H., 1707
Weller, James L., 1291
Wen, Tsui-Jung, 501
Wenzel, Walter W., 1641
Whittaker, Anne, 1651
Widell, Susanne, 1001
Williams, Lorraine E., 263
Williamson, John D., 1397
Wilson, Clyde, 1267
Winter, Katherine, 1413
Wiskich, Joseph T., 1145
Wolf, Shmuel, 1599
Woodson, William R., 205
Wu, Gusui, 427
Wurtele, Eve Syrkin, 1371

X

Xia, Yiji, 501, 925
Xu, Liwen, 387
Xu, Xiaojie, 501

Y

Yamada, Kenji, 1065
Yamaguchi-Shinozaki, Kazuko, 327
Yamamoto, Kotaro T., 419
Yamamoto, Yuri T., 1397
Yamasaki, Hideo, 1405
Yan, Xianghe, 915
Yang, Hong-Min, 1453
Yasumori, Miho, 901
Ye, Bin, 1443
Ye, Zheng-Hua, 1341
Yermiyahu, Uri, 1119
Yi, Hanju, 335
Yin, Shaohui, 437
Yoon, Hae Won, 763
Young, Andrew J., 1609
Young, Todd E., 737
Yu, Diqiu, 343

Z

Zacherl, Markus, 485, 493
Zamski, Eli, 1397, 1599
Zawadzki, Tadeusz, 1083
Zelcer, Aharon, 51
Zhang, Hong, 1525
Zhang, Jian, 1443
Zhang, Qisen, 1145
Zheng, Ling, 387
Zheng, Suqin, 387
Zhou, Huaping, 971
Zhu, Yanmin, 1691
Zhu, Yun J., 609
Zimmerman, Richard C., 599

Plant Physiol. (1997) 115: xxxiii–xl
0032-0889/97/115/xxxiii/08

Subject Index

A

Abscisic acid
  guard cell actin filament response to, 1491
  potato tuber dormancy and, 1453
Abscisic acid-, stress-, ripening-induced (ASR)-like protein, in apricot fruit, 1288, 1732
Acer japonicum (*see* Full-moon maple)
Acetabularia acetabulum V type ATPase, proteolipid subunit of, 864
Acetolactate synthase
  in *Chlamydomonas reinhardtii*, 1288
  in *Volvox carteri*, 1288
Acetylcoenzyme A carboxylase, *Arabidopsis* coding for, 1371
Acid invertase, in sugarcane stems, 609
Actin filaments, of guard cells
  K^+ channel activities and, 335
  response to light and abscisic acid by, 1491
S-Adenosyl-L-methionine decarboxylase, in mustard, 1287
Adiantum capillus-veneris, phytochrome gene of, overexpression of by transgenic *Arabidopsis*, 79
ADL1 protein, in *Arabidopsis* membrane, 763
ADP-glucose pyrophosphorylase, potato leaf carbohydrate partitioning and, 471
Agrobacterium
  VirD2 protein in, *AtKAPα* gene-mediated import of, 314
  wheat genetic transformation mediated by, 971
Agrostis palustris (*see* Creeping bentgrass)
Alfalfa
  isoflavone-*O*-methyltransferase in, 1289
  lignifying tissues in, caffeoyl-coenzyme A 3-*O*-methyltransferase and, 1341
Algae
  chloroplast gene transcription in, photoregulation of, 773
  chloroplastic and cytosolic inositol 1-phosphate synthase in, 727
  gas exchange and carbon allocation in, 1049
Allium cepa (*see* Onion)
Alternative oxidase
  of *Arum italicum* spadices, pyruvate and, 1145
  of soybean cotyledons, pyruvate and, 1145
  of soybean roots and hypocotyls, 1499
  of tobacco, salicylic acid and, 783
Aluminum, isolated wheat root plasma membrane sorption of, 1119
Aluminum ion stress, induction of GDP dissociation inhibitor by, in tobacco, 314
Aluminum tolerance, in wheat, 657
Amaranth, photosystem II excitation quenching in, quantum yields and rate constants of, 803
Amaranthus cruentus (*see* Amaranth)
Amino acid(s)
  functions of, in tobacco peroxisomal targeting signal type 1, 881
  LHT1 transport of, in *Arabidopsis*, 1127
Amino acid oxidase, of *Chlamydomonas reinhardtii*, M(α) subunit sequence of, 1731
γ-Aminobutyric acid
  ethylene biosynthesis stimulation by, in sunflower, 129
  metabolism and functions of, 1
1-Aminocyclopropane-1-carboxylate oxidase, in European white birch, 315
Ammonium, transport of, across pea root nodule symbiosome membrane, 519
Amylopectin crystal, biosynthesis of, by *Chlamydomonas reinhardtii*, 949
Anion channel blocker, auxin response and, in *Arabidopsis* hypocotyls, 533
Annexin, vacuole-associated, tobacco cell expansion and, 753
Antenna
  size of, photoinactivation and, in pea leaves, 151
  xanthophyll cycle activity in, 1609
Antenna protein Lhca4, antisense inhibition of, in *Arabidopsis*, 1525
Anthocyanin, sweet potato cell production of, vacuolar protein in, 1065
Antimycin A, petunia cell cultured with, respiratory chains and, 617
Antirrhinum majus (*see* Snapdragon)
Apium graveolens (*see* Celery)
Apricot, fruit of
  abscisic acid-, stress, ripening-induced (ASR)-like protein in, 1288, 1732
  cysteine proteinase AFTP1 in, during ripening, 1732
  metallothionein-like protein in, 1288
Aquaporin, soybean cDNA encoding, 313
Arabidopsis thaliana
  AtArcA gene in, as homolog of tobacco *ArcA* gene, 863
  AtHJ10 gene in, as homolog of yeast calmodulin-binding *CAJ1* gene, 863
  AtKAPα gene in, agrobacterium VirD2 protein import mediated by, 314
  auxin-inducible indoleacetic acid gene in, 1732
  biotin carboxylase subunit of acetylcoenzyme A carboxylase coding in, 1371
  bor1–1 mutant of, boron requirements of, 901
  CAB gene in, fluence and wavelength requirements of, 1533
  CAC2 gene in, characterization of, 1371
  cDNA clones in, similarity to microadaptins of clathrin-coated vesicle adaptor complexes, 1289
  CER2 gene in, cuticular wax accumulation and, 925
  chloroplasts of, blue light-responsive *psbD* gene promoter in, 213
  CLA1 gene product in, transketolase-like protein similarity to, 1289
  cold-inducible genes in, hydrophobic protein coding by, 569
  cystathionine-β-lyase in, 864
  dehydration-inducible Rd17 gene in, 1287
  dgd1 mutant of, photosynthetic apparatus in, 1175
  DNA mismatch repair in, 833
  early light-inducible protein in, 1287
  α-glucosidase gene in, 863
  glycolate oxidase in, 315
  heat-shock transcription factor in, CDPK phosphorylation of, 93
  hypocotyls of, auxin responses of, anion channel blockers and, 533
  3-ketoacyl-acyl carrier protein synthase III coding in, 864
  Lhca4 antenna protein in, antisense inhibition of, 1525
  LHT1 as amino acid transporter in, 1127
  massugu1 mutation of, auxin-induced growth curvature in, 419
  maximum biomass of, 317
  membrane of, dynamin-like protein ADL1 in, 763
  Myc-like gene in, 315
  phosphatidyl-4-phosphate 5-kinase homolog in, 864
  phytochrome gene in, expression patterns of, 959
  proliferation-induced gene in, 1385
  recombinant NADH:nitrate reductase of, production of in yeast, 1135
  root hair of, genetic morphogenesis of, 981
  salicylic acid-mediated oxidative damage in, H_2O_2 in, 137
  semidwarf mutants of, gibberellin responsiveness of, 1009
  TCH4 xyloglucan endotransglycosylase in, 181, 1319
  transgenic, *Adiantum capillus-veneris* phytochrome gene overexpression by, 79
  ubiquitin-conjugating enzyme family in, 1731
  uvh6 mutant of, heat and UV radiation response of, 1351
  vacuole-sorting receptor in, 29
  vtc1 mutant of, ascorbic acid metabolism in, 1277
  wound signaling in, 817
Arabidopsis thaliana receptor-like protein (AtELP), cloning and location of, 311
Arabinoxylanase, in wheat flour, 1619
Arum italicum, spadices of, alternative oxidase kinetics in, pyruvate and, 1145
Ascorbic acid, metabolism of, in *Arabidopsis vtc1* mutant, 1277
Aspen hybrid
  phytochrome A in, 1733
  xylem development in, indoleacetic acid radial concentration gradient and, 577
ASR-like protein (*see* Abscisic acid-, stress-, ripening-induced (ASR)-like protein)
ATP, in pea seed proglobulin assembly, 1629
ATP synthase, proton slip through, chloroplast-coupling factor 1 and, 1549

Auxin
effect on grape berry ripening and development, 1155
gibberellin 20-oxidase regulation by, in pea pericarps, 123
growth curvature induced by, in *Arabidopsis massugu1* mutation, 419
indoleacetic acid inducible by, in *Arabidopsis*, 1732
response of, anion channel blocker effect on, in *Arabidopsis* hypocotyls, 533
Auxin-response element, G-box-binding protein binding of, in soybean, 397
Avena sativa (*see* Oat)
axi1, of tobacco, pea cDNA encoding homolog of, 313
5-Azacytidine, reactivation mediated by, in transgenic rice, 361

B

Banana
fruit of, ripening-related glucan endo-1,3-β-glucosidase homolog in, 864
gene expression in
in fruit, 463
in pulp, 453
Barley
early embryogenesis gene in, 1732
HV34 endo-β-glucanase in, 1731
ndhA sequence in, 313
seeds of, protein repair by isoaspartyl methyltransferase in, 1481
Bean (*see also* Castor bean; Mung bean; Soybean)
plasma membrane of, NADPH-O_2^- synthase in, 543
root nodules of, boron deficiency in, 1329
secretory pathway/plasma membrane of, β-glucuronidase protein retention in, 915
thermotolerance of, isoprene and, 1413
uricase II, in organs other than nodules, 1307
Beech (*see* Japanese beech)
Beet (*see* Red beet)
Bell pepper, chromoplasts of, *PAP* housekeeping gene in, 1185
Berries, of grape, effect of auxin on ripening and development of, 1155
Beta vulgaris (*see* Red beet)
Betula pendula (*see* European white birch)
Biotin carboxylase subunit, of acetylcoenzyme A carboxylase, *Arabidopsis* coding for, 1371
Birch (*see* European white birch)
Black cherry, mandelonitrile lyase gene in, 1359
Blue light
Chlamydomonas sexual competence and, 1241
phosphorylation dependent on, oat phototropism and, 485, 493
psbD gene promoter responsive to, in *Arabidopsis* chloroplasts, 213
Boron
deficiency of, in bean root nodules, 1329
requirement for, in *Arabidopsis bor1–1* mutant, 901
BP-80, localization of, 29
Brassica juncea (*see* Mustard)
Brassica napus (*see* Canola; Rapeseed)
Brassica oleracea (*see* Cauliflower; Kale)

C

cab-m1 gene, in maize, Ca^{2+}-mediated photoregulation of, 477
Caffeoyl-coenzyme A 3-*O*-methyl-transferase
in grapevine-induced resistance response, 1039
lignifying tissues and, 1341
Calcium
in *Fucus serratus* zygote photopolarization, 249
in parsley cells, leaf senescence and, 51
photoregulation mediated by, in maize *cab*-m1 gene expression, 477
Callose biosynthesis, in higher plants, 643
Calmodulin, in *Fucus serratus* photopolarization, 249
Calmodulin-binding *CAJ1* yeast gene, *Arabidopsis tHJ10* gene as homolog of, 863
Calmodulin-like domain protein kinase, in *Tortula ruralis*, 313
Canola (*see also* Rapeseed)
chloroplasts of, chlorophyll breakdown in, 669
3-ketoacyl-CoA synthase encoding by, 313
CANT1 cDNA, in cotton fibers, 314
Capsicum annuum (*see* Bell pepper)
Carbohydrate(s), growth and, in tobacco, snapdragon, and parsley leaves, 241
Carbohydrate partitioning, in potato leaves, effects of ADP-glucose pyrophosphorylase and triose phosphate translocator on, 471
Carbon dioxide
eelgrass productivity and light requirements and, 599
growth and
in rice, 15, 199
Rubisco concentration and carbohydrate distribution and, in tobacco, snapdragon, and parsley, 241
photosynthetic capacity and, in rice leaf, 191
photosystem requirement in, *Flaveria bidentis RbcS* gene and, 1163
tobacco leaf ontogeny and, 1195
Carbon metabolism
sugar starvation-induced changes in, maize root tips, 1505
in transgenic potato, phloem-specific expression of tobacco mosaic virus and, 1599
Carbon partitioning
in developing cotton seeds, sucrose synthase and, 375
in sugarcane internodal tissue, 1653
Carnation
petals of, ethylene receptors on, 863
pollination-induced ethylene in, 205
Carnivorous plants, signal transduction in, 1461
Castanea sativa (*see* Chestnut)
Castor bean
endosperm of, phosphatidylethanolamine biosynthetic pathway in, 1589
membrane glyoxysomes of, porin in, 891
phospholipase D gene in, 387
Cauliflower (*see also* Kale)
plasma membrane of, tubulin bound in, 1001
roots of, wound- and dark-inducible mRNA in, 314
water-soluble chlorophyll protein in, 841
CDPK (*see* Cyclin-dependent protein kinase)
Celery
cell walls of, estimating polymer rigidity in, 587
subcellular mannitol dehydrogenase in, 1397
Cell death
hypersensitive, salicylic acid in, in soybean, 291
programmed, in maize endosperm, 737
Cell expansion factor, in *Zinnia elegans* culture, 683
Cellulose biosynthesis, in higher plants, 643
Cell walls
of celery, estimating polymer rigidity in, 587
of onion, rigidity of, 593
of tomato, di-isodityrosine formation in, 87
Chaperone activity, of chestnut seed heat shock protein, 71
Chestnut, seeds of, heat-shock protein in, chaperone activity of, 71
Chitinase class I, *Medicago truncatula* coding for, 864
Chitinases, in grapevine, in response to systemic acquired resistance activators or fungal challenge, 1029
Chlamydomonas reinhardtii
acetolactate synthase in, 1288
amino acid oxidase of, M(α) subunit sequence of, 1731
amylopectin crystal biosynthesis by, 949
photoreceptor current in, 633
sexual competence of, blue light signal transduction chains and, 1241
Chlorophyll breakdown
in canola chloroplasts, 669
red chlorophyll catabolite reductase in, 677
Chlorophyll-binding protein, light-harvesting, in Japanese beech, 1731
Chloroplast(s)
of *Arabidopsis*, blue light-responsive *psbD* gene promoter in, 213
of canola, chlorophyll breakdown in, 669
of *Heterosigma carterae*, photoregulation of gene transcription in, 773
hydroxyl radical oxidation of, mannitol protection against, 527
of pea, glyceraldehyde-3-phosphate dehydrogenase in, 1201
of spinach, SDS-stable proteases in, 827
translational regulation in, 1293
Chloroplast coupling factor 1, and proton slip through ATP synthase, 1549
Chromoplasts, of bell pepper, *PAP* housekeeping gene in, 1185
Chrysanthemum, flavanone 3-hydoxylase in, 1733
Chrysanthemum morifolium (*see* Chrysanthemum)
Cinnamate 4-hydroxylase, transgenic tobacco expression of, lignin alterations and, 41

Citrus paradisi, roots of, YRN1 and HEAHIO-like genes in, 314
Clathrin-coated vesicle adaptor complexes, microadaptins of, *Arabidopsis* cDNA clone similarity to, 1289
Cochliobolus carbonum infection, histone hyperacetylation response to, in maize, 1021
Cold
Arabidopsis genes inducible by, hydrophobic protein coding by, 569
perception of, membrane fluidity and, 875
photoinhibition induced by, in maize, 171
Cold tolerance, of *Arabidopsis* TCH4 xyloglucan endotransglycosylase, 181, 1319
Coleoptiles
of maize, separation of phytochrome actions in, 511
of oat, phosphorylation gradient and phototropism in, 485
Coleus, root zone salinity in, raffinose oligosaccharide metabolism and transport and, 1267
Coleus blumei (*see* Coleus)
Conyza bonariensis, oxidant stress resistance in, putrescine and, 1443
Corn (*see* Maize)
Corolla, of carnation, senescence of, 205
Cotton
developing, phosphoenolpyruvate carboxylase in, 315
fibers of, CANT1 cDNA in, 314
histones H2B and H3 in, 1732
photosystem II excitation quenching in, quantum yields and rate constants of, 803
seeds of, sucrose synthase in, 375
vacuolar H^+-ATPase subunit E in, 314
Cotyledons, of soybean, alternative oxidase kinetics in, pyruvate and, 1145
Craterostigma plantagineum (*see* Resurrection plant)
Creeping bentgrass, heat shock recovery in, 229
CTP:ethanolaminephosphate cytidylyltransferase, in castor bean mitochondria, 1589
Cuticular wax
CER2 Arabidopsis gene and, 925
gl8 maize gene and, 501
Cyanobacteria
chloroplastic and cytosolic inositol 1-phosphate synthase in, 727
photosystem I PsaD subunit in, 1288, 1701
photosystem II protein in, thermal protection of, 1473
state transitions and photosystem organization in, 991
Cyclin-dependent protein kinase, isoforms of, in soybean, 314
Cyclin-dependent protein kinase phosphorylation, of *Arabidopsis* heat-shock transcription factor, 93
Cytochrome P450
in dhurrin biosynthesis, in sorghum seedlings, 1663
in licorice, 1288
Cytokinins, in plants, 865

D

Dark
Brassica oleracea root mRNA inducible by, 314
pea *lip1* mutant adaptation to, 23
soybean adaptation to, small G proteins in, 1732
Daucus carota (*see* Carrot)
Defense mechanisms, of host (*see* Host defense mechanisms)
Dehydration, *Arabidopsis* Rd17 gene induced by, 1287
Dhurrin biosynthesis, in sorghum seedlings, cytochrome P450 in, 1663
Dianthus caryophyllus (*see* Carnation)
2,6-Dichloroisonicotinic acid, rice treated with, jasmonic acid level and, 61
Di-isodityrosine, in tomato cell walls, 87
Dimethylsulfopropionate, *S*-methylmethionine conversion to, in *Wollastonia biflora*, 1541
DNA mismatch repair, in *Arabidopsis*, 833
Drought tolerance, in transgenic tobacco, 1211
Dunaliella salina, gas exchange and carbon allocation in, 1049
Dynamin-like protein ADL1, in *Arabidopsis* membrane, 763

E

Early light-inducible protein (ELIP), in *Arabidopsis*, 1287
Eelgrass, productivity and light requirements of, CO_2 enrichment and, 599
Electronic Plant Gene Register, 313, 863, 1287, 1731
Elicitin, in prevention of *Phytophthora cryptogea* infection, in tobacco leaves, 1557
Elongation factor 1A, in maize, endosperm protein quality and, 1101
Embryogenesis, early, barley gene for, 1732
Endo-β-glucanase HV34, in barley, 1731
Endopolygalacturonase, suppression of, tomato fruit polyuronite molecular weight and, 717
Endosperm
of castor bean, phosphatidylethanolamine biosynthetic pathway in, 1589
of maize
programmed cell death in, 737
protein quality in, elongation factor 1A and, 1101
Enod40 gene, in *Lotus japonicus*, 863
Erwinia amylovora harpin, tobacco leaves treated with, myelin basic protein kinase activation by, 853
Escherichia coli, recombinant rice hemoglobins in, 1259
Ethylene biosynthesis (*see also* Senescence)
GABA stimulation of, in sunflower, 129
pollination-induced, in carnation, 205
Ethylene receptors
on carnation petals, 863
in rice, 315
ETR1 homolog, in tobacco, 1733
Euglena gracilis, chloroplastic and cytosolic inositol 1-phosphate synthase in, 727
Eukaryotic translation initiation factor SA, potato cDNA encoding, 864
European white birch, 1-aminocyclopropane-1-carboxylate oxidase in, 315

F

Fagus crenata (*see* Japanese beech)
Fatty acid(s)
3-ketoacyl-CoA synthase biosynthesis of, *Brassica napus* coding for, 313
triacylglucose, in wild tomato, 1581
unsaturation of, temperature and, 875
Fatty acid desaturase, in parsley, fungal induction of, 283
Ferredoxin-$NADP^+$ reductase, solubilization of from thylakoid membrane, in oxidative stress, methyl viologen and, 1723
Ferrochelatase, in rice, 1731
Fiber, of flax, rhamnogalacturonide tetrasaccharides of, as *Rubus fruticosus* signaling molecules, 793
Flavanone 3-hydoxylase, in chrysanthemum, 1733
Flaveria bidentis, *RbcS* gene in, photosystem CO_2 quantum requirement and, 1163
Flavonoid-peroxidase reaction, as H_2O_2 detoxification mechanism, in scheffelera, 1405
Flax, semi-retted fibers of, rhamnogalacturonide tetrasaccharides of, as *Rubus fruticosus* signaling molecules, 793
Flower buds, of full-moon maple, freezing behavior of, 1515
Fluorescence quenching, nonphotochemical, zeaxanthin conversion and, 1609
Folate derivatives, for 10-formyltetrahydrofolate synthesis, in pea leaves, 299
10-Formyltetrahydrofolate synthesis, in pea leaves, folate enzymes for, 299
Forsythia, lignifying tissues in, caffeoylcoenzyme A 3-*O*-methyltransferase and, 1341
Forsythia suspensa (*see* Forsythia)
Freezing behavior, of full-moon maple leaves and flower buds, 1515
Fruit
of apricot
(ASR)-like protein in, 1288, 1732
cysteine proteinase AFTP1 in, during ripening, 1732
metallothionein-like protein in, 1288
of banana
gene expression in, 463
ripening-related glucan endo-1,3-β-glucosidase homolog in, 864
of tomato, polyuronite molecular weight in, 717
Fucus serratus, zygote photopolarization in, Ca^{2+} and calmodulin dynamics in, 249
Full-moon maple, leaves and flower buds of, freezing behavior of, 1515
Fungus
fatty acid desaturase induction by, in parsley, 283
histone hyperacetylation response to, in maize, 1021
systemic acquired resistance to, in grapevine chitinase, 1029

G

GABA (*see* γ-Aminobutyric acid)
Gas exchange, in algae, 1049
G-box-binding protein, in soybean, auxin-response element binding by, 397
GDP dissociation inhibitor, aluminum ion stress induction of, in tobacco, 314
Gibberellin, *Arabidopsis* semidwarf mutant response to, 1009
Gibberellin 20-oxidase, in pea pericarps, 123
Glucan endo-1,3-β-glucosidase homolog, in banana fruit, 864
α-Glucosidase gene, in *Arabidopsis*, 863
β-Glucuronidase, retention of, in secretory pathway/plasma membrane, 915
Glyceraldehyde-3-phosphate dehydrogenase, in pea chloroplasts, 1201
Glycerolipids, of membrane, in enhancing photoinhibition tolerance, 551
Glycine max (*see* Soybean)
Glycolate oxidase, in *Arabidopsis*, 315
Glycoprotein, in cell walls of boron-deficient bean root nodules, 1329
Glycoprotein PsNLEC-1, in pea root nodules, 1431
Glycyl-tRNA synthetase, in *Arabidopsis*, 1732
Glycyrrhiza echinata (*see* Licorice)
Glyoxysomes, in castor bean membranes, porin in, 891
gl8 maize gene, molecular cloning of, 501
Gossypium hirsutum (*see* Cotton)
Grape, berries, effect of auxin on ripening and development of, 1155
Grapevine
  caffeoyl-coenzyme A 3-*O*-methyltransferase of, in induced resistance response, 1039
  chitinases of, systemic acquired resistance activators or fungal challenge, 1029
Growth
  of celery cell walls, polymer rigidity estimation and, 587
  CO_2 and
    in rice plant, 199
    in tobacco, snapdragon, and parsley, 241
  nitrogen level and, in rice plant, 199
  phytochrome actions on, in maize coleoptiles, 511
Growth anisotropy, in maize roots, 101
Growth curvature, auxin-induced, in *Arabidopsis massugu1* mutation, 419
GTP-binding proteins
  in dark-adapted soybean, 1732
  Rab-related, in carrot, 1733
Guard cells, actin filaments of
  response to light and abscisic acid by, 1491
  in *Vicia faba*, K^+ channel activities in, 335

H

H^+-ATPase, vacuolar
  in *Arabidopsis*, 1732
  in cotton, 314
Hair, on root (*see* Root hair)
Harpin, from *Erwinia amylovora*, tobacco leaves treated with, myelin basic protein kinase activation by, 853
Heat, in protection of cyanobacteria photosystem II, 1473
Heat shock, recovery from, in creeping bentgrass, 229
Heat-shock protein, chaperone activity of, in chestnut seed, 71
Heat-shock transcription factor(s), in *Arabidopsis*, CDPK phosphorylation of, 93
Heat stress
  Arabidopsis uvh6 mutant response to, 1351
  isoprene and, 1413
Heat treatment, transgenic tobacco activities after, 939
Helianthus annuus (*see* Sunflower)
Hemoglobins, of rice, 1259
Heterosigma carterae, chloroplast gene transcription in, photoregulation of, 773
Hevea brasiliensis Müll. Arg. (*see* Rubber tree)
Histone H2A.F/Z, in *Arabidopsis*, 1385
Histone H2B and H3, in cotton, 1732
Histone hyperacetylation, as maize response to *Cochliobolus carbonum* infection, 1021
Hordeum vulgare (*see* Barley)
Host defense mechanisms
  H_2O_2-induced, in transgenic potato, 427
  sesquiterpene cyclase gene regulation in, 437
HV34 endo-β-glucanase, in barley, 1731
Hydrilla verticillata, photosynthesis in, 1683
Hydrogen peroxide
  flavonoid-peroxidase detoxification of, in schefflera, 1405
  host defense mechanisms induced by, in transgenic potato, 427
  in salicylic acid-mediated oxidative damage, in *Arabidopsis*, 137
Hydroxyl radical oxidation, mannitol protection of chloroplast against, 527
Hypersensitive cell death, salicylic acid in, in soybean, 291
Hypocotyls
  of *Arabidopsis*, auxin responses of, anion channel blockers and, 533
  of soybean, alternative oxidase in, 1499

I

IAA gene (*see* Indoleacetic acid gene)
Indoleacetic acid
  auxin-inducible, in *Arabidopsis*, 1732
  in pea *rms1* mutant, root branching and, 1251
  radial concentration gradient of, aspen xylem development and, 577
Indoleacetic acid gene, in mung bean, 315
Inositol 1-phosphate synthase, chloroplastic and cytosolic, 727
Insect chewing, potato leaf response to, 1299
Invertase isozymes, sink metabolism and, in tomato, 273
Ipomoea batatas (*see* Sweet potato)
Isopartyl methyltransferase, protein repair by, in barley seeds, 1481
Isoprene, thermotolerance and, 1413

J

Japanese beech
  photosystem II light-harvesting chlorophyll-binding protein in, 1731
  Rubisco in, 863
Jasmonic acid
  in 2,6-dichloroisonicotinic acid-treated rice, 61
  in wound-induced gene activation pathways, in *Arabidopsis*, 817

K

Kale (*see also* Cauliflower)
  stigma of, pollen attachment to, 1221
β-Ketoacyl reductase, *gl8* maize gene coding for, 501
3-Ketoacyl-acyl carrier protein synthase III, *Arabidopsis* coding for, 864
3-Ketoacylcoenzyme A synthase, fatty acid biosynthesis by, *Brassica napus* coding for, 313
Kudzu, thermotolerance of, isoprene and, 1413

L

Latex, from rubber tree, phosphoribosylpyrophosphate synthetase from, 847
Leaves
  of full-moon maple, freezing behavior of, 1515
  of parsley
    Rubisco content and carbohydrate distribution in, growth effects on, 241
    senescence of, mesophyll cell Ca^{2+} and, 51
  of pea
    10-formyltetrahydrofolate synthesis in, folate enzymes for, 299
    photoinactivation in, antenna size and, 151
  of potato
    carbohydrate partitioning in, effects of ADP-glucose pyrophosphorylase and triose phosphate translocator on, 471
    chewing insect-specific wound response in, 1299
  of rice
    CO_2 concentration and, 191, 199
    nitrogen concentration and, 191, 199
    photosynthetic capacity of, 191
    sucrose-phosphate synthase and phosphatase association in, 223
  of snapdragon, Rubisco content and carbohydrate distribution in, growth effects on, 241
  of soybean, nitrogen effect on protein sulfur remobilization in, 1673
  of spinach, sucrose-phosphate synthase and phosphatase association in, 223
  of tobacco
    CO_2 and ontogeny of, 1195
    Erwinia amylovora harpin treatment of, myelin basic protein kinase activation by, 853
    Phytophthora cryptogea infection in, RNase prevention of, 1557
    Rubisco content and carbohydrate distribution in, growth effects on, 241
    Rubisco deficiency and, 1569
  of wheat, SO_4^{2-} deprivation in, photosynthesis and Rubisco content after, 1231

Lectins, in root, rhizobia and, 869
Lhca4 antenna protein, antisense inhibition of, in *Arabidopsis*, 1525
LHT1, amino acid transport by, in *Arabidopsis*, 1127
Licorice, cytochrome P450 cDNAs in, 1288
Light (*see also specific color or type of light*)
guard cell actin filament response to, 1491
Light-harvesting chlorophyll-binding protein, in Japanese beech, 1731
Lignin, alterations of, in transgenic tobacco, 41
Linum usitatissimum (*see* Flax)
Lipid-protein particles, thylakoid-derived, Rubisco in, 1073
Lithospermum erythrorhizon, WrbA homolog in, 1287
Lotus japonicus, *Enod40* gene in, 863
Lycopersicon esculentum (*see* Tomato)
Lycopersicon pennellii (*see* Wild tomato)
Lycopersicon peruvianum (*see* Wild tomato)

M

Magnesium chelatase, in *Rhodobacter sphaeroides*, 1733
Magnesium chelatase subunit D, in pea, 315
Maize
cab-m1 gene in, Ca^{2+}-mediated photoregulation of, 477
cold-induced photoinhibition in, 171
coleoptiles of, separation of phytochrome actions in, 511
elongation factor 1A in, endosperm protein quality and, 1101
endosperm of, programmed cell death in, 737
gl8 gene of, molecular cloning of, 501
roots of
growth anisotropy in, 101
in seedling, oxygen deprivation effects on, 1109
tips of, sugar starvation-induced carbon metabolism changes in, 1505
sugary1 gene in, 1733
vacuole-sorting receptor in, 29
Mandelonitrile lyase gene, in black cherry, 1359
Manduca sexta, secretory pathway/plasma membrane of, β-glucuronidase protein retention in, 915
Mannitol, chloroplast protection by, against hydroxyl radical oxidation, 527
Mannitol dehydrogenase, in celery cell, 1397
Maple (*see* Full-moon maple)
Mastigocladus laminosus, photosystem I of, PsaD gene for, 1288
Medicago sativa (*see* Alfalfa)
Medicago truncatula, chitinase class I coding in, 864
Metal hyperaccumulation, by *Thlaspi goesingense*, 1641
Metallothionein-like protein, in apricot fruit, 1288
Methyl viologen, in solubilization of ferredoxin-$NADP^+$ reductase from thylakoid membrane, in oxidative stress, 1723
S-Methylmethionine, conversion of to dimethylsulfopropionate, in *Wollastonia biflora*, 1541
Microadaptins, of clathrin-coated vesicle adaptor complexes, *Arabidopsis* cDNA clone similarity to, 1289
Microtubule orientation, phytochrome actions on, in maize coleoptiles, 511
Mung bean
Aux/IAA gene family in, 315
cellulose and callose biosynthesis in, 643
Mussa spp. (*see* Banana)
Mustard, *S*-adenosyl-L-methionine decarboxylase in, 1287
Myelin basic protein kinase, in tobacco leaves, *Erwinia amylovora* harpin activation of, 853

N

NaCl stress, in rice, osmoprotectants and, 159
NaCl tolerance, in transgenic tobacco, 1211
NADH:nitrate reductase, from *Arabidopsis*, production of, in *Pichia pastoris*, 1135
NADP-malate dehydrogenase, manipulation of, in transgenic tobacco, 705
NADPH-O_2^- synthase, in bean plasma membrane, 543
Nickel hyperaccumulation, by *Thlaspi goesingense*, 1641
Nicotiana spp. (*see* Tobacco)
Nitrate reductase, deregulation of, in tobacco, physiological consequences of, 623
Nitrogen
protein sulfur remobilization and, in soybean leaves, 1673
rice growth and, 199
rice leaf photosynthetic capacity and, 191
Nodulation factor perception, pea *sym2* gene and, 351
Nodules (*see* Root nodules)
Nucleosome assembly protein, in pea, 313

O

Oat, phosphorylation gradient and phototropism in
in coleoptiles, 485
in seedlings, 493
Onion, cell walls of, rigidity of, 593
Ononitol production, in transgenic tobacco, NaCl and drought tolerance and, 1211
Oryza sativa (*see* Rice)
Osmoprotectants, rice NaCl stress and, 159
Oxidase, alternative (*see* Alternative oxidase)
Oxidation
ferredoxin-$NADP^+$ reductase solubilization from thylakoid membranes in, methyl viologen and, 1723
by hydroxyl radical, mannitol protection of chloroplast against, 527
resistance to, in *Conyza bonariensis* and wheat, putrescine and, 1443
salicylic acid-mediated, in *Arabidopsis*, H_2O_2 and, 137
12-Oxo-phytodienoic acid, wound induced, 1057
Oxygen deprivation, maize seedling root effects of, 1109

P

p40 protein, ribosome-associated, in soybean, 864
PAP housekeeping gene, in bell pepper chromoplasts, 1185
Parenchyma
of barley root xylem, in K^+ homeostasis and signaling, 1709
of potato storage organ, water transport through, 1089
Parsley
fatty acid desaturase in, fungal induction of, 283
leaves of
Rubisco content and carbohydrate distribution in, growth effects on, 241
senescence of, mesophyll cell Ca^{2+} and, 51
Pea
chloroplasts of, glyceraldehyde-3-phosphate dehydrogenase in, 1201
encoding tobacco axi1 homolog, 313
leaves of
10-formyltetrahydrofolate synthesis in, folate enzymes for, 299
photoinactivation in, antenna size and, 151
lip1 mutant of, dark adaptation in, 23
magnesium chelatase subunit D in, 315
nucleosome assembly protein in, 313
pericarps of, gibberellin 20-oxidase expression in, 123
rms1 mutant of, indoleacetic acid and zeatin riboside levels of, root branching and, 1251
root nodules of
NH_4^+ transport across symbiosome membrane of, 519
PsNLEC-1 glycoprotein in, 1431
seeds of, proglobulin assembly in, 1629
sym2 gene of, nodulation factor perception mechanism and, 351
vacuole-sorting receptor in, 29
Pericarps, of pea, gibberellin 20-oxidase expression in, 123
Peroxisomal targeting signal type 1, amino acid functions in, in tobacco, 881
Petals, of carnation, ethylene receptors on, 863
Petroselinum cripsum (*see* Parsley)
Petunia, cellular mitochondrial respiratory chains of, in culture containing antimycin A, 617
Petunia hybrida (*see* Petunia)
pH, *Arabidopsis* TCH4 xyloglucan endotransglycosylase activity and, 181
Phaseolus vulgaris (*see* Bean)
Phenylalanine ammonia-lyase, transgenic tobacco expression of, lignin alterations and, 41
Pheophorbide *a* cleavage, in canola chloroplast senescence, 669
Phosphatidylethanolamine biosynthetic pathway, in castor bean endosperm, 1589
Phosphatidyl-4-phosphate 5-kinase homolog, in *Arabidopsis*, 864
Phospho*enol*pyruvate carboxylase, in developing cotton, 315
Phospholipase D gene, in castor bean, 387
Phosphoribosylpyrophosphate synthetase, in rubber tree latex, 847

Phosphorylation, blue light-dependent, oat phototropism and, 485, 493
Photoinactivation, in pea leaves, antenna size and, 151
Photoinhibition
  cold-induced, in maize, 171
  enhancing tolerance of, in membrane glycerolipids, 551
Photopolarization, Ca^{2+} and calmodulin dynamics in, in *Fucus serratus* zygotes, 249
Photoreceptor current, in *Chlamydomonas reinhardtii*, 633
Photoregulation, Ca^{2+}-mediated, of maize *cab*-m1 gene expression, 477
Photosynthesis
  in *Arabidopsis dgd1* mutant, 1175
  Kranz-less C_4-type, in *Hydrilla verticillata*, 1683
  of tobacco leaf, nitrate reductase deregulation and, 623
  in wheat leaves, SO_4^{2-} deprivation and, 1231
Photosystem(s), of cyanobacteria, 991
Photosystem(s) I
  Lhca4 antenna protein in, in *Arabidopsis*, antisense inhibition of, 1525
  PsaD subunit of
    in *Mastigocladus laminosus*, 1288
    in *Synechocystis*, 1701
Photosystem(s) I and II, CO_2 requirement in, *Flaveria bidentis RbcS* gene and, 1163
Photosystem(s) II
  excitation quenching in, quantum yields and rate constants of, 803
  light-harvesting chlorophyll-binding protein of, in Japanese beech, 1731
  thermal protection of, in cyanobacteria, 1473
Phototropism, phosphorylation gradient and, in oat, 485, 493
Phycoerythrin, gene encoding, in *Porphyra tenera*, 1287
Phytochrome
  Arabidopsis CAB gene induction by, fluence and wavelength requirements of, 1533
  photolabile and photostable actions of, in maize coleoptiles, 511
Phytochrome A
  in Aspen hybrid, 1733
  N-terminal functional regions of, 693
Phytochrome genes, in *Arabidopsis*, 79, 959
Phytophthora cryptogea infection, in tobacco leaves, RNase prevention of, 1557
Pichia pastoris, recombinant *Arabidopsis* NADH:nitrate reductase production in, 1135
Pisum sativum (*see* Pea)
Pitcher plant, signal transduction in, 1461
Plant Gene Register, 313, 863, 1287, 1731
Plasma membrane
  of bean, NADPH-O_2^- synthase in, 543
  of cauliflower, tubulin bound in, 1001
  β-glucuronidase retention in, 915
  isolated from wheat roots, aluminum sorption to, 1119
Pollination
  ethylene induced by, in carnation, 205
  of kale stigma, 1221
Polyadenlyation, of plant RNA, 321
Polyphenol oxidase promoter, wound signals in, in tomato, 409
Polyuronite, molecular weight of, in tomato fruit, 717
Populus tremula × *Populus tremuloides* (*see* Aspen hybrid)
Porin, in castor bean membrane glyoxysomes, 891
Porphyra tenera, phycoerythrin-encoding gene in, 1287
Potassium channel activities, in guard cells of *Vicia faba*, actin filaments and, 335
Potassium homeostasis, barley root xylem parenchyma cells in, 1709
Potato
  disease resistance in, salicylic acid level and, 343
  eukaryotic translation initiation factor SA encoding in, 864
  leaves of
    carbohydrate partitioning in, effects of ADP-glucose pyrophosphorylase and triose phosphate translocator on, 471
    chewing insect-specific wound response in, 1299
  storage organ parenchyma of, water transport through, 1089
  transgenic
    H_2O_2-induced host defense mechanisms in, 427
    phloem-specific expression of tobacco mosaic virus in, carbon metabolism and, 1599
  tubers of, dormancy of, abscisic acid content and, 1453
Proglobulin assembly, in pea seeds, ATP in, 1629
Protease, SDS-stable, in spinach chloroplasts, 827
Proteins
  hydrophobic, cold-inducible *Arabidopsis* genetic coding of, 569
  repair of, by isopartyl methyltransferase, in barley seeds, 1481
Proton slip, through ATP synthase, chloroplast-coupling factor 1 and, 1549
Prunus serotina (*see* Black cherry)
psbD gene promoter, blue-light-responsive, in *Arabidopsis* chloroplasts, 213
PsNLEC-1 glycoprotein, in pea root nodules, 1431
Pueraria lobata (*see* Kudzu)
Pulp, of banana, gene expression in, 453
Putrescine, oxidant stress resistance and, in *Conyza bonariensis* and wheat, 1443
Pyruvate, alternative oxidase kinetics and, in *Arum italicum* spadices and soybean cotyledons, 1145

Q

Quercus alba (*see* White oak)

R

Rab, G protein related to, in carrot, 1733
Raffinose oligosaccharide, metabolism and transport of, coleus root zone salinity and, 1267
Rapeseed (*see also* Canola)
  drought-induced protein in, 841
Red beet
  chloroplastic and cytosolic inositol 1-phosphate synthase in, 727
  storage tissue of, prolonged washing of, transport processes after, 263
Red chlorophyll catabolite reductase, in chlorophyll breakdown, 677
Resistance response, of grapevine
  induced, caffeoyl-coenzyme A 3-*O*-methyltransferase in, 1039
  systemic, chitinases in, 1029
Respiratory alternative oxidase (*see* Alternative oxidase)
Resurrection plant, sucrose-phosphate synthase in, 113
Rhamnogalacturonide tetrasaccharide, of flax fiber, as *Rubus fruticosus* signaling molecules, 793
Rhizobium bacteria
  in root border cells, 1693
  root lectins and, 869
Rhodobacter sphaeroides, magnesium chelatase subunit encoding in, 1733
Ribulose-1,5-bisphosphate carboxylase/oxygenase
  deficiency of, in tobacco leaves, 1569
  in Japanese beech, 863
  plant growth and, in tobacco, snapdragon, and parsley, 241
  in thylakoid-derived lipid-protein particles, 1073
  in wheat leaves, SO_4^{2-} deprivation and, 1231
Rice
  chloroplastic and cytosolic inositol 1-phosphate synthase in, 727
  2,6-dichloroisonicotinic acid-treated, jasmonic acid level and, 61
  ethylene receptor in, 315
  ferrochelatase in, 1731
  hemoglobins of, 1259
  leaves of
    CO_2 concentration and, 191, 199
    nitrogen concentration and, 191, 199
    photosynthetic capacity of, 191
    sucrose-phosphate synthase and phosphatase association in, 223
  NaCl stress in, osmoprotectants and, 159
  shoots of, CO_2 level and, 15
  transgenic, gene silencing and reactivation in, 361
  vacuole-sorting receptor in, 29
Ricinus communis (*see* Castor bean)
Ripening
  of apricot fruit
    ASR-like protein in, 1288, 1732
    cysteine proteinase AFTP1 during, 1732
    metallothionein-like protein during, 1288
  of grape berries, auxin and, 1155
RNA, polyadenylation of, 321
Root(s)
  of coleus, salinity of, raffinose oligosaccharide metabolism and transport and, 1267
  of maize, growth anisotropy in, 101
  of maize seedlings, oxygen deprivation effects on, 1109
  of pea *rms1* mutant, indoleacetic acid and zeatin riboside levels and, 1251
  of soybean, alternative oxidase in, 1499

Root border cells, microbial pathogenesis from, 1693
Root hair, of *Arabidopsis*, genetic morphogenesis of, 981
Root lectins, rhizobia and, 869
Root membranes, of wheat, water channels in, 561
Root nodules
  of bean, boron deficiency in, 1329
  of pea
    NH_4^+ transport across symbiosome membrane of, 519
    PsNLEC-1 glycoprotein in, 1431
  of soybean, sucrose synthase in, 1731
Root tips, of maize, sugar starvation-induced carbon metabolism changes in, 1505
Root xylem parenchyma cells, of barley, in K^+ homeostasis and signaling, 1709
Rubber tree latex, phosphoribosylpyrophosphate synthetase from, 847
Rubisco (*see* Ribulose-1,5-bisphosphate carboxylase/oxygenase)
Rubus fruticosus, flax fiber rhamnogalacturonide tetrasaccharides as signaling molecules in, 793

S

Saccharum spp. (*see* Sugarcane)
Salicylic acid
  alternative oxidase of tobacco and, 783
  disease resistance and, in potato, 343
  in hypersensitive cell death, in soybean, 291
  oxidative damage mediated by, in *Arabidopsis*, H_2O_2 and, 137
Salt (*see* NaCl *entries*)
Sarracenia purpurea (*see* Pitcher plant)
Schefflera, flavonoid-peroxidase reaction in, as H_2O_2 detoxification mechanism, 1405
Schefflera arboricola (*see* Schefflera)
SDS (*see* Sodium dodecyl sulfate)
Seed(s)
  of barley, protein repair by isoaspartyl methyltransferase in, 1481
  of chestnut, heat shock protein in, chaperone activity of, 71
  of cotton, sucrose synthase in, 375
  of pea
    gibberellin 20-oxidase regulation by, 123
    proglobulin assembly in, 1629
Seedling(s)
  of oat, phosphorylation gradient and phototropism in, 493
  roots of, in maize, oxygen deprivation effects on, 1109
  of sorghum, dhurrin biosynthesis in, cytochrome P450 in, 1663
Self-incompatibility ribonuclease, in wild tomato, 1421
Senescence (*see also* Ethylene biosynthesis)
  of canola chloroplasts, chlorophyll breakdown in, 669
  of carnation corolla, pollination-induced ethylene and, 205
  of parsley leaves, mesophyll cell Ca^{2+} and, 51
Sesquiterpene cyclase gene, regulation of, in tobacco, 437
Shoots
  of rice, CO_2 level and, 15
  of tobacco, morphogenesis of, source strength and, 907
Signal transduction
  barley root xylem parenchyma cells in, 1709
  blue light and, *Chlamydomonas reinhardtii* sexual competence and, 1241
  in pitcher plant, 1461
  sugar sensing and, 7
  in water stress, 327
Sink metabolism, in tomato, extracellular invertase isoenzymes and, 273
Snapdragon, leaves of, Rubisco content and carbohydrate distribution in, growth effects on, 241
Solanum tuberosum (*see* Potato)
Sorghum
  photosystem II excitation quenching in, quantum yields and rate constants of, 803
  seedlings of, dhurrin biosynthesis in, cytochrome P450 in, 1663
Sorghum bicolor (*see* Sorghum)
Soybean
  aquaporin coding by, 313
  CDPK isoforms in, 314
  cotyledons of, alternative oxidase kinetics in, pyruvate and, 1145
  dark-adapted, G proteins in, 1732
  G-box-binding protein in, auxin-response element binding by, 397
  hypocotyls of, alternative oxidase in, 1499
  leaves of, nitrogen effect on protein sulfur remobilization in, 1673
  lignifying tissues in, caffeoyl-coenzyme A 3-*O*-methyltransferase and, 1341
  ribosome-associated p40 protein in, 864
  root nodules of, sucrose synthase in, 1731
  roots of, alternative oxidase in, 1499
Spacides, of *Arum italicum*, alternative oxidase kinetics in, pyruvate and, 1145
Spinach
  chloroplasts of, SDS-stable proteases in, 827
  leaves of, sucrose-phosphate synthase and phosphatase association in, 223
Spinacia oleracea (*see* Spinach)
Spirulina platensis, chloroplastic and cytosolic inositol 1-phosphate synthase in, 727
Stem
  of aspen hybrid, xylem development in, indoleacetic acid radial concentration gradient and, 577
  of sugarcane, acid invertase and sucrose phosphate synthase in, 609
Stigma, of kale, pollen attachment to, 1221
Storage organ parenchyma, of potato, water transport through, 1089
Storage tissue, of beet, prolonged washing of, transport processes after, 263
Stress (*see specific stressor*)
Sucrose synthase
  in developing cotton seed, 375
  in soybean root nodules, 1731
Sucrose-phosphate phosphatase
  in rice leaves, 223
  in spinach leaves, 223
Sucrose-phosphate synthase
  acid invertase and, in sugarcane stems, 609
  in resurrection plant, 113
  in rice leaves, 223
  in spinach leaves, 223
Sugar sensing, signal transduction and, 7
Sugarcane
  internodal tissue of, carbon partitioning in, 1653
  stem of, acid invertase and sucrose phosphate synthase in, 609
Sugary1 gene, in maize, 1733
Sunflower
  ethylene biosynthesis in, GABA stimulation of, 129
  photosystem II excitation quenching in, quantum yields and rate constants of, 803
  variation potential in, 1083
Sweet potato, anthocyanin-producing cells of, vacuolar protein in, 1065
Sym2 gene, in pea, nodulation factor perception and, 351
Synechococcus spp.
  membrane glycerolipids of, in enhancing photoinhibition tolerance, 551
  photosystem II protein in, thermal protection of, 1473
Systemic acquired resistance, activation of by elicitin, in tobacco leaves, 1557
  by grapevine chitinases, 1029

T

TCH4 xyloglucan endotransglycosylase, in *Arabidopsis*, 181, 1319
Temperature (*see* Cold *entries*; Heat *entries*)
γ-Thionin, in tobacco, 314
Thlaspi goesingense, nickel hyperaccumulation by, 1641
Thylakoid-derived lipid-protein particles, Rubisco in, 1073
Tobacco
  alternative oxidase of, salicylic acid and tobacco mosaic virus infection effects on, 783
  ArcA gene of, *Arabidopsis AtArcA* gene as homolog of, 863
  axi1 of, pea cDNA encoding homolog of, 313
  cell expansion in, vacuole-associated annexin protein and, 753
  ETR1 homolog coding in, 1733
  induction of GDP dissociation inhibitor by aluminum ion stress in, 314
  leaves of
    CO_2 and ontogeny of, 1195
    Erwinia amylovora harpin treatment of, myelin basic protein kinase activation by, 853
    Phytophthora cryptogea infection in, RNase prevention of, 1557
    Rubisco content and carbohydrate distribution in, growth effects on, 241
    Rubisco deficiency and, 1569
  lignifying tissues in, caffeoyl-coenzyme A 3-*O*-methyltransferase and, 1341
  nitrate reductase deregulation in, physiological consequences of, 623
  photosystem II excitation quenching in, quantum yields and rate constants of, 803
  sesquiterpene cyclase gene activation in, 437

shoots of, morphogenesis of, source strength and, 907
γ-thionin in, 314
transgenic
heat treatment and, 939
lignin alterations in, 41
manipulation of NADP-malate dehydrogenase in, 705
salt and drought tolerance in, 1211
secretory pathway/plasma membrane of, β-glucuronidase protein retention in, 915
type 1 peroxisomal targeting signal in, amino acid functions in, 881
vacuole-sorting receptor in, 29
Tobacco mosaic virus infection
effect on alternative oxidase of tobacco, 783
phloem-specific expression of, carbon metabolism and, 1599
Tomato (*see also* Wild tomato)
cell walls of, di-isodityrosine formation in, 87
extracellular invertase isoenzymes of, sink metabolism and, 273
fruit of, polyuronite molecular weight in, 717
polyphenol oxidase promoter in, wound signals in, 409
Tortula ruralis, calmodulin-like domain protein kinase in, 313
Transketolase-like protein, similarity to *Arabidopsis CLA1* gene product, 1289
Transport changes, in washed beet, 263
Triacylglucose fatty acid, in wild tomato, 1581
Triose phosphate, potato leaf carbohydrate partitioning and, 471
Triticum aestivum (*see* Wheat)
Tubers, of potato, dormancy of, abscisic acid content and, 1453
Tubulin, plasma membrane-bound, in cauliflower, 1001

U

Ubiquitin-conjugating enzyme family, in *Arabidopsis*, 1731
Ultraviolet radiation, *Arabidopsis uvh6* mutant response to, 1351
Uricase II, in bean organs other than nodules, 1307

V

Vacuolar H^+-ATPase
in *Arabidopsis*, 1732
in cotton, 314
Vacuole, anthocyanin-containing, in sweet potato cells, 1065
Vacuole associated annexin protein, tobacco cell expansion and, 753
Vacuole-sorting receptor, in pea, rice, maize, tobacco, and *Arabidopsis*, 29
Vicia faba, guard cells of, K^+ channel activities in, actin filaments and, 335
Vigna radiata (*see* Mung bean)
Vitis vinefera (*see* Grapevine)
Volvox carteri, acetolactate synthase in, 1288

W

Washing, transport processes after, in beet storage tissue, 263
Water, transport of, through potato storage organ parenchyma, 1089
Water channels, in wheat root membranes, 561
Water stress
growth anisotropy in, in maize roots, 101
rapeseed protein induced by, 841
signal transduction and, 327
Wax, cuticular (*see* Cuticular wax)
Wheat
aluminum tolerance in, 657
genetic transformation of, *Agrobacterium* in, 971
isolated plasma membrane vesicles of, aluminum sorption to, 1119
leaves of, SO_4^{2-} deprivation in, photosynthesis and Rubisco content after, 1231
oxidant stress resistance in, putrescine and, 1443
root membranes of, water channels in, 561
Wheat flour, arabinoxylanase in, 1619
White oak, thermotolerance of, isoprene and, 1413
Wild tomato (*see also* Tomato)
self-incompatibility ribonuclease in, 1421
triacylglucose fatty acid composition in, 1581
Wollastonia biflora, *S*-methylmethionine conversion to dimethylsulfopropionate in, 1541
Wound
Brassica oleracea root mRNA inducible by, 314
by chewing insect, potato leaf response to, 1299
gene activation by, in *Arabidopsis*, 817
12-oxo-phytodienoic acid induced by, 1057
polyphenol oxidase promoter response to, in tomato, 409
WrbA homolog, in *Lithospermum erythrorhizon*, 1287

X

Xanthophyll cycle activity, in antenna of higher plant photosynthetic membranes, 1609
Xyloglucan endotransglycosylase TCH4, in *Arabidopsis*, 181, 1319

Y

Yeast
calmodulin-binding *CAJ1* gene of, *Arabidopsis tHJ10* gene as homolog of, 863
recombinant *Arabidopsis* NADH:nitrate reductase production in, 1135

Z

Zea mays (*see* Maize)
Zeatin, in of pea *rms1* mutant roots, indoleacetic acid level and, 1251
Zeaxanthin conversion, nonphotochemical fluorescence quenching and, 1609
Zinnia, lignifying tissues in, caffeoylcoenzyme A 3-*O*-methyltransferase and, 1341
Zinnia elegans (*see* Zinnia)
secreted cell expansion-inducing factor in, 683
Zostera marina (*see* Eelgrass)
Zygote polarization, in *Fucus serratus*, Ca^{2+} and calmodulin in, 249